RAW SEQUENCE LISTING

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Application Serial Number: _____ 10/547,530 _____

Source: _____ PCT _____

Date Processed by STIC: _____ 09/13/2005 _____

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PCT

RAW SEQUENCE LISTING   DATE: 09/13/2005
PATENT APPLICATION: US/10/547,530   TIME: 10:10:08

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 3 <110> APPLICANT: Regents of the University of California, The
 4         Leonard, Rome H.
 5         Valerie, Kickhoefer A.
 6         Sujna, Raval-Fernandes
 7         Phoebe, Stewart L.
 9 <120> TITLE OF INVENTION: Vault and Vault-like Carrier Molecules
11 <130> FILE REFERENCE: 14399-1EP
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C--> 13 <140> **CURRENT APPLICATION NUMBER: US/10/547,530**
C--> 14 <141> **CURRENT FILING DATE: 2005-08-31**
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16 <150> PRIOR APPLICATION NUMBER: 60/453,800
17 <151> PRIOR FILING DATE: 2003-03-10
19 <150> PRIOR APPLICATION NUMBER: PCT/US04/07434
20 <151> PRIOR FILING DATE: 2004-03-10
22 <160> NUMBER OF SEQ ID NOS: 143
24 <170> SOFTWARE: PatentIn version 3.2
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 893
28 <212> TYPE: PRT
29 <213> ORGANISM: Homo sapiens
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38             20                  25                  30
41 Lys Thr Tyr Ile Arg Gln Asp Asn Glu Arg Val Leu Phe Ala Pro Met
42         35                  40                  45
45 Arg Met Val Thr Val Pro Pro Arg His Tyr Cys Thr Val Ala Asn Pro
46     50                  55                  60
49 Val Ser Arg Asp Ala Gln Gly Leu Val Leu Phe Asp Val Thr Gly Gln
50 65                  70                  75                  80
53 Val Arg Leu Arg His Ala Asp Leu Glu Ile Arg Leu Ala Gln Asp Pro
54             85                  90                  95
57 Phe Pro Leu Tyr Pro Gly Glu Val Leu Glu Lys Asp Ile Thr Pro Leu
58             100                 105                 110
61 Gln Val Val Leu Pro Asn Thr Ala Leu His Leu Lys Ala Leu Leu Asp
62         115                 120                 125
65 Phe Glu Asp Lys Asp Gly Asp Lys Val Val Ala Gly Asp Glu Trp Leu
66     130                 135                 140
69 Phe Glu Gly Pro Gly Thr Tyr Ile Pro Arg Lys Glu Val Glu Val Val
70 145                 150                 155                 160
73 Glu Ile Ile Gln Ala Thr Ile Ile Arg Gln Asn Gln Ala Leu Arg Leu
74             165                 170                 175
77 Arg Ala Arg Lys Glu Cys Trp Asp Arg Asp Gly Lys Glu Arg Val Thr
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81 Gly Glu Glu Trp Leu Val Thr Thr Val Gly Ala Tyr Leu Pro Ala Val
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86       210                   215                   220
89 Thr Ala Leu His Leu Arg Ala Arg Arg Asn Phe Arg Asp Phe Arg Gly
90 225                   230                   235                   240
93 Val Ser Arg Arg Thr Gly Glu Glu Trp Leu Val Thr Val Gln Asp Thr
94                   245                   250                   255
97 Glu Ala His Val Pro Asp Val His Glu Glu Val Leu Gly Val Val Pro
98            260                   265                   270
101 Ile Thr Thr Leu Gly Pro His Asn Tyr Cys Val Ile Leu Asp Pro Val
102            275                   280                   285
105 Gly Pro Asp Gly Lys Asn Gln Leu Gly Gln Lys Arg Val Val Lys Gly
106       290                   295                   300
109 Glu Lys Ser Phe Phe Leu Gln Pro Gly Glu Gln Leu Glu Gln Gly Ile
110 305                   310                   315                   320
113 Gln Asp Val Tyr Val Leu Ser Glu Gln Gln Gly Leu Leu Leu Arg Ala
114                   325                   330                   335
117 Leu Gln Pro Leu Glu Glu Gly Glu Asp Glu Glu Lys Val Ser His Gln
118            340                   345                   350
121 Ala Gly Asp His Trp Leu Ile Arg Gly Pro Leu Glu Tyr Val Pro Ser
122            355                   360                   365
125 Ala Lys Val Glu Val Val Glu Glu Arg Gln Ala Ile Pro Leu Asp Glu
126       370                   375                   380
129 Asn Glu Gly Ile Tyr Val Gln Asp Val Lys Thr Gly Lys Val Arg Ala
130 385                   390                   395                   400
133 Val Ile Gly Ser Thr Tyr Met Leu Thr Gln Asp Glu Val Leu Trp Glu
134            405                   410                   415
137 Lys Glu Leu Pro Pro Gly Val Glu Glu Leu Leu Asn Lys Gly Gln Asp
138            420                   425                   430
141 Pro Leu Ala Asp Arg Gly Glu Lys Asp Thr Ala Lys Ser Leu Gln Pro
142            435                   440                   445
145 Leu Ala Pro Arg Asn Lys Thr Arg Val Val Ser Tyr Arg Val Pro His
146       450                   455                   460
149 Asn Ala Ala Val Gln Val Tyr Asp Tyr Arg Glu Lys Arg Ala Arg Val
150 465                   470                   475                   480
153 Val Phe Gly Pro Glu Leu Val Ser Leu Gly Pro Glu Glu Gln Phe Thr
154            485                   490                   495
157 Val Leu Ser Leu Ser Ala Gly Arg Pro Lys Arg Pro His Ala Arg Arg
158            500                   505                   510
161 Ala Leu Cys Leu Leu Leu Gly Pro Asp Phe Phe Thr Asp Val Ile Thr
162       515                   520                   525
165 Ile Glu Thr Ala Asp His Ala Arg Leu Gln Leu Gln Leu Ala Tyr Asn
166       530                   535                   540
169 Trp His Phe Glu Val Asn Asp Arg Lys Asp Pro Gln Glu Thr Ala Lys
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173 Leu Phe Ser Val Pro Asp Phe Val Gly Asp Ala Cys Lys Ala Ile Ala
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178             580             585             590
181 Lys Asn Ser Ala Arg Ile Ile Arg Thr Ala Val Phe Gly Phe Glu Thr
182         595             600             605
185 Ser Glu Ala Lys Gly Pro Asp Gly Met Ala Leu Pro Arg Pro Arg Asp
186     610             615             620
189 Gln Ala Val Phe Pro Gln Asn Gly Leu Val Val Ser Ser Val Asp Val
190 625             630             635             640
193 Gln Ser Val Glu Pro Val Asp Gln Arg Thr Arg Asp Ala Leu Gln Arg
194             645             650             655
197 Ser Val Gln Leu Ala Ile Glu Ile Thr Thr Asn Ser Gln Glu Ala Ala
198             660             665             670
201 Ala Lys His Glu Ala Gln Arg Leu Glu Gln Glu Ala Arg Gly Arg Leu
202         675             680             685
205 Glu Arg Gln Lys Ile Leu Asp Gln Ser Glu Ala Glu Lys Ala Arg Lys
206     690             695             700
209 Glu Leu Leu Glu Leu Glu Ala Leu Ser Met Ala Val Glu Ser Thr Gly
210 705             710             715             720
213 Thr Ala Lys Ala Glu Ala Glu Ser Arg Ala Glu Ala Ala Arg Ile Glu
214             725             730             735
217 Gly Glu Gly Ser Val Leu Gln Ala Lys Leu Lys Ala Gln Ala Leu Ala
218             740             745             750
221 Ile Glu Thr Glu Ala Glu Leu Gln Arg Val Gln Lys Val Arg Glu Leu
222         755             760             765
225 Glu Leu Val Tyr Ala Arg Ala Gln Leu Glu Leu Glu Val Ser Lys Ala
226     770             775             780
229 Gln Gln Leu Ala Glu Val Glu Val Lys Lys Phe Lys Gln Met Thr Glu
230 785             790             795             800
233 Ala Ile Gly Pro Ser Thr Ile Arg Asp Leu Ala Val Ala Gly Pro Glu
234             805             810             815
237 Met Gln Val Lys Leu Leu Gln Ser Leu Gly Leu Lys Ser Thr Leu Ile
238             820             825             830
241 Thr Asp Gly Ser Thr Pro Ile Asn Leu Phe Asn Thr Ala Phe Gly Leu
242         835             840             845
245 Leu Gly Met Gly Pro Glu Gly Gln Pro Leu Gly Arg Arg Val Ala Ser
246     850             855             860
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267 gagagggtac tgtttgcccc catgcgcatg gtgaccgtcc ccccacgtca ctactgcaca     180
269 gtggccaacc ctgtgtctcg ggatgcccag ggcttggtgc tgtttgatgt cacagggcaa     240
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271 gttcggcttc gccacgctga cctcgagatc cggctggccc aggacccctt cccccctgtac    300
273 ccaggggagg tgctggaaaa ggacatcaca cccctgcagg tggttctgcc caacactgcc    360
275 ctccatctaa aggcgctgct tgattttgag gataaagatg gagacaaggt ggtggcagga    420
277 gatgagtggc ttttcgaggg acctggcacg tacatccccc ggaaggaagt ggaggtcgtg    480
279 gagatcattc aggccaccat catcaggcag aaccaggctc tgcggctcag ggcccgcaag    540
281 gagtgctggg accgggacgg caaggagagg gtgacagggg aagaatggct ggtcaccaca    600
283 gtaggggcgt acctcccagc ggtgtttgag gaggttctgg atttggtgga cgccgtcatc    660
285 cttacggaaa agacagccct gcacctccgg gctcggcgga acttccggga cttcaggggga    720
287 gtgtcccgcc gcactgggga ggagtggctg gtaacagtgc aggacacaga ggcccacgtg    780
289 ccagatgtcc acgaggaggt gctgggggtt gtgcccatca ccaccctggg cccccacaac    840
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293 gtggtcaagg gagagaagtc tttttttcctc cagccaggag agcagctgga acaaggcatc    960
295 caggatgtgt atgtgctgtc ggagcagcag gggctgctgc tgagggccct gcagcccctg   1020
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299 ggacccctgg agtatgtgcc atctgccaaa gtggaggtgg tggaggagcg ccaggccatc   1140
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309 cgcgtgcccc acaacgctgc ggtgcaggtg tacgactacc gagagaagcg agcccgcgtg   1440
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323 actgctgtct ttggctttga gacctcggaa gcgaagggcc ccgatggcat ggccctgccc   1860
325 aggcccgcggg accaggctgt cttcccccaa aacgggctgg tggtcagcag tgtggacgtg   1920
327 cagtcagtgg agcctgtgga tcagaggacc cgggacgccc tgcaacgcag cgtccagctg   1980
329 gccatcgaga tcaccaccaa ctcccaggaa gcggcggcca agcatgaggc tcagagactg   2040
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347 ctcttcaaca cagcctttgg gctgctgggg atggggcccg agggtcagcc cctgggcaga   2580
349 agggtggcca gtgggcccag ccctggggag gggatatccc cccagtctgc tcaggcccct   2640
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369 Asn Gly Gly Lys Phe Ser Phe Ser Leu Asn Pro Gln Cys Thr His Ile
370          35                 40                 45
373 Ile Leu Asp Asn Ala Asp Val Leu Ser Gln Tyr Gln Leu Asn Ser Ile
374      50                 55                 60
377 Gln Lys Asn His Val His Ile Ala Asn Pro Asp Phe Ile Trp Lys Ser
378 65                 70                 75                 80
381 Ile Arg Glu Lys Arg Leu Leu Asp Val Lys Asn Tyr Asp Pro Tyr Lys
382              85                 90                 95
385 Pro Leu Asp Ile Thr Pro Pro Asp Gln Lys Ala Ser Ser Ser Glu
386              100                105                110
389 Val Lys Thr Glu Gly Leu Cys Pro Asp Ser Ala Thr Glu Glu Glu Asp
390          115                120                125
393 Thr Val Glu Leu Thr Glu Phe Gly Met Gln Asn Val Glu Ile Pro His
394      130                135                140
397 Leu Pro Gln Asp Phe Glu Val Ala Lys Tyr Asn Thr Leu Glu Lys Val
398 145                150                155                160
401 Gly Met Glu Gly Gly Gln Glu Ala Val Val Val Glu Leu Gln Cys Ser
402              165                170                175
405 Arg Asp Ser Arg Asp Cys Pro Phe Leu Ile Ser Ser His Phe Leu Leu
406              180                185                190
409 Asp Asp Gly Met Glu Thr Arg Arg Gln Phe Ala Ile Lys Lys Thr Ser
410          195                200                205
413 Glu Asp Ala Ser Glu Tyr Phe Glu Asn Tyr Ile Glu Glu Leu Lys Lys
414      210                215                220
417 Gln Gly Phe Leu Leu Arg Glu His Phe Thr Pro Glu Ala Thr Gln Leu
418 225                230                235                240
421 Ala Ser Glu Gln Leu Gln Ala Leu Leu Leu Glu Glu Val Met Asn Ser
422              245                250                255
425 Ser Thr Leu Ser Gln Glu Val Ser Asp Leu Val Glu Met Ile Trp Ala
426          260                265                270
429 Glu Ala Leu Gly His Leu Glu His Met Leu Leu Lys Pro Val Asn Arg
430          275                280                285
433 Ile Ser Leu Asn Asp Val Ser Lys Ala Glu Gly Ile Leu Leu Leu Val
434      290                295                300
437 Lys Ala Ala Leu Lys Asn Gly Glu Thr Ala Glu Gln Leu Gln Lys Met
438 305                310                315                320
441 Met Thr Glu Phe Tyr Arg Leu Ile Pro His Lys Gly Thr Met Pro Lys
442              325                330                335
445 Glu Val Asn Leu Gly Leu Leu Ala Lys Lys Ala Asp Leu Cys Gln Leu
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450          355                360                365
453 Pro Pro Ser Leu Ala Lys Tyr Arg Ala Leu Arg Cys Lys Ile Glu His
454      370                375                380
457 Val Glu Gln Asn Thr Glu Glu Phe Leu Arg Val Arg Lys Glu Val Leu
458 385                390                395                400
461 Gln Asn His His Ser Lys Ser Pro Val Asp Val Leu Gln Ile Phe Arg
462              405                410                415
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VERIFICATION SUMMARY　　　　　　　　DATE: 09/13/2005
PATENT APPLICATION:　**US/10/547,530**　　TIME: 10:10:09

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